CLAIMS

What is claimed is:

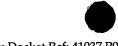1   1.   A machine implemented method of operation comprising

2   determining if a first application provides a first function/service to which first

3   data stored in a first data set are associated; and

4   if so, generating a first candidate operation that distributes said first data

5   stored in said first data set into said first application for performance consideration.

1   2.   The method of claim 1, wherein said determining comprises examining a

2   plurality of data subscription statements of said first application, and determining if

3   any of the data subscription statements specifies said first application as being a

4   subscriber of data associated with said first function/service.

1   3.   The method of claim 2, wherein function/service to which said data

2   subscribed to by said first application are associated, as well as function/service to

3   which said first data stored in said first dataset are associated, are both expressed

4   in term of a first cross application function/service classification of a cross

5   application function/service based data classification model.

1   4.   The method of claim 3, wherein said first cross application function/service

2   classification is in a form of an encoded binary representation.

1   5.   The method of claim 2, wherein the method further comprises retrieving said

2   data subscription statements of said first application.

1   6.   The method of claim 5, wherein said retrieving of the data subscription

2   statements of the first application comprises retrieving the data subscription

3   statements from a desriptor of the first application.

1   7.   The method of claim 1, wherein the method further comprises

2   determining if a second application also provides said first function/service to

3   which said first data stored in said first data set are associated; and

4   if so, generating a second candidate operation that distributes said first data

5   stored in said first data set into said second application for performance

6   consideration.

1   8.   The method of claim 7, wherein if both said first and second candidate

2   operations are generated, the method further comprises

3   generating first and second rankings for said first and second candidate

4   operations; and

5   selecting at least one of said first or said second candidate operations for

6   performance, based at least in part on said first and second rankings of said first

7   and second candidate operations.

1   9.   The method of claim 8, wherein said first data stored in said first dataset is

2   published by a third application, with said first/second application being a different

3   version of said third application, said generating of the first/second ranking for said

4   first/second candidate operation comprises generating a first/second version ranking

5   for said first/second candidate operation that favors a later version over an earlier

6   version.

1   10.   The method of claim 9, wherein said first, second and third applications are

2   identifed by first, second and third application identifiers comprising first, second and

3   third version infromation, and said generating of first/second version ranking

4   comprises performing a predetermined arithmetic operation on said first/second

5   binary application identifier with said third binary application identifer that yields a

6   higher verion ranking for a later version.

1   11.   The method of claim 8, wherein said first data stored in said first dataset is

2   published by a third application, with said first/second and third applications being

3   different applications, said generating of the first/second ranking for said first/second

4   candidate operation comprises generating a first/second function ranking for said

5   first/second candidate operation that favors an application having more

6   function/service matches with said third application over an application having less

7   function/service matches with said third application.

1   12.   The method of claim 11, wherein said first, second and third applications are

2   identifed by first, second and third application identifiers comprising first, second and

3   third function/service information encoded in a binary form, and said generating of

4   first/second function/service ranking comprises performing at least a predetermined

5   boolean operation on said first/second function/service information encoded in

6   binary form with said third function/service information encoded in binary form that

7   yields a higher function/service ranking for an application with closer function/service

8   matches.

1   13.   The method of claim 8, wherein said selecting of at least one of said first and

2   said second candidate operations for performance is further based on one or more

3   selection rules.

1   14.   The method of claim 13, wherein said one or more selection rules comprise

2   one or more constant select rules.

1   15.   The method of claim 14, wherein said one or more constant select rules

2   comprise a first constant selection rule that selects the candidate operation with the

3   highest ranking for performance.

1   16.   The method of claim 13, wherein said one or more selection rules comprise

2   one or more variable selection rules that variably selects one or more candidate

3   operations based on user input.

1   17.   The method of claim 1, wherein the method further comprises

2   determining if said first application provides a second function/service to

3   which second data stored in a second data set are associated; and

4   if so, generating a second candidate operation that distributes said second

5   data stored in said second data set into said first application for performance

6   consideration.

1   18.   The method of claim 1, wherein said first data comprises control data usable

2   to control operation of said first application.

1 19. The method of claim 1, wherein said first data comprises user data

2 consumable using said first application.

1 20. The method of claim 1, wherein the method further comprises discovering

2 presence of said first application.

1 21. The method of claim 20, wherein said discovering comprises

2 retrieving a plurality of presence criteria of said first application; and

3 determining if the presence criteria are met.

1 22. The method of claim 21, wherein said retrieving comprises retrieving said

2 plurality of presence criteria from a desriptor of said first application.

1 23. The method of claim 21, wherein said determining if the presence criteria are

2 met comprises accessing a registry of an operating environment within which said

3 first application is installed to verify if said presence criteria are met.

1 24. A machine implemented method of operation comprising

2 generating a first ranking for a first candidate operation to distribute data

3 stored in a dataset, exported from a first application, to a second application;

4 generating a second ranking for a second candidate operation to distribute

5 said data stored in said dataset, exported from said first application, to a third

6 application; and

7 selecting one or both of said first and second candidate operations for

8 performance, based at least in part on said generated first and second rankings.

1   25.   The method of claim 24, wherein said second/third application is a different

2   version of said first application, said generating of the first/second ranking for said

3   first/second candidate operation comprises generating a first/second version ranking

4   for said first/second candidate operation that favors a later version over an earlier

5   version.

1   26.   The method of claim 25, wherein said first, second and third applications are

2   identifed by first, second and third application identifiers comprising first, second and

3   third version infromation, and said generating of first/second version ranking

4   comprises performing a predetermined arithmetic operation on said second/third

5   version information with said first version information that yields a higher verion

6   ranking for a later version.

1   27.   The method of claim 24, wherein said first and said second/third applications

2   are different applications, said generating of the first/second ranking for said

3   first/second candidate operation comprises generating a first/second function

4   ranking for said first/second candidate operation that favors an application having

5   more function/service matches with said first application over an application having

6   less function/service matches with said first application.

1   28.   The method of claim 27, wherein said first, second and third applications are

2   identifed by first, second and third application identifiers comprising first, second and

3   third function/service information encoded in a binary form, and said generating of

4   first/second function/service ranking comprises performing a predetermined boolean

5   operation on said first function/service information encoded in binary form with said

6 second/third function/service information encoded in binary form that yields a higher

7 function/service ranking for an application with closer function/service matches.

1 29. The method of claim 24, wherein said selecting of at least one of said first

2 and said second candidate operations for performance is further based one or more

3 selection rules.

1 30. The method of claim 29, wherein said one or more selection rules comprise

2 one or more constant select rules.

1 31. The method of claim 30, wherein said one or more constant select rules

2 comprise a first constant selection rule that selects the candidate operation with the

3 highest ranking for performance.

1 32. The method of claim 29, wherein said one or more selection rules comprise

2 one or more variable selection rules that variably selects one or more candidate

3 operations based on user input.

1 33. A machine implemented method of operation comprising

2 retrieving a plurality of data subscription statements of an application;

3 determining importable data of said application based on data subscription

4 specifications of said data subscription statements; and

5 importing said importable data of said application, based at least in part on

6 said data subscription specification of said data subscription statements of said

7 application.

1 34.   The method of claim 33, wherein said retrieving of the data subscription

2 statements of the application comprises retrieving the data subscription statements

3 from a desriptor of the application.

1 35.   The method of claim 33, wherein said data subscription specifications

2 reference data having cross application function/service based classifications of a

3 cross application function/service based data classification model.

1 36.   The method of claim 35, wherein said data subscription spefications

2 comprise encoded binary references referencing said data having having cross

3 application function/service based classifications of a cross application

4 function/service based data classification model.

1 37.   The method of claim 33, wherein the method further comprises discovering

2 presence of said application.

1 38.   The method of claim 37, wherein said discovering comprises

2   retrieving a plurality of presence criteria of said application; and

3   determining if the presence criteria are met.

1 39.   The method of claim 38, wherein said retrieving comprises retrieving said

2 plurality of presence criteria from a desriptor of said application.

1 40.   The method of claim 38, wherein said determining if the presence criteria are

2 met comprises accessing a registry of an operating environment within which said

3 application is installed to verify if said presence criteria are met.

1   41.   A machine implemented method of operation comprising

2   retrieving a plurality of presence criteria of an application;

3   determining if the presence criteria are met;

4   if so, further determining importable data of said application; and

5   importing said importable data of said application.

1   42.   The method of claim 41, wherein said retrieving comprises retrieving said

2 plurality of presence criteria from a desriptor of said application.

1   43.   The method of claim 41, wherein said determining if the presence criteria are

2 met comprises accessing a registry of an operating environment within which said

3 application is installed to verify if said presence criteria are met.

1   44.   An article of manufacture comprising:

2   a storage medium comprising a recordable medium; and

3   a plurality of machine readable programming instructions recorded on said

4 recordable medium of said storage medium, designed to program an apparatus to

5 enable the apparatus to

6   determine if a first application provides a first function/service to which first

7   data stored in a first data set are associated, and

8   if so, generate a first candidate operation that distributes said first data

9   stored in said first data set into said first application for performance

10   consideration.

1 45. The article of claim 44, wherein said programming instructions are designed

2 to enable the apparatus to perform said determining by examining a plurality of data

3 subscription statements of said first application, and determining if any of the data

4 subscription statements specifies said first application as being a subscriber of data

5 associated with said first function/service.

1 46. The artcile of claim 45, wherein function/service to which said data

2 subscribed to by said first application are associated, as well as function/service to

3 which said first data stored in said first dataset are associated, are both expressed

4 in term of a first cross application function/service classification of a cross

5 application function/service based data classification model.

1 47. The article of claim 46, wherein said first cross application function/service

2 classification is in a form of an encoded binary representation.

1 48. The article of claim 45, wherein said programming instructions are further

2 designed to enable the apparatus to retrieve said data subscription statements of

3 said first application.

1 49. The article of claim 48, wherein said programming instructions are designed

2 to enable the apparatus to perform said retrieving of the data subscription

3 statements of the first application by retrieving the data subscription statements from

4 a desriptor of the first application.

1 50. The article of claim 44, wherein said programming instructions are further

2 designed to enable the apparatus to

3   determine if a second application also provides said first function/service to

4   which said first data stored in said first data set are associated; and

5   if so, generate a second candidate operation that distributes said first data

6   stored in said first data set into said second application for performance

7   consideration.

1   51.   The artcile of claim 50, wherein said programming instructions are further

2   designed to enable the apparatus to

3   generate first and second rankings for said first and second candidate

4   operations, and

5   select at least one of said first or said second candidate operations for

6   performance, based at least in part on said first and second rankings

7   of said first and second candidate operations,

8   if both said first and second candidate operations are generated.

1   52.   The article of claim 51, wherein said programming instructions are further

2   designed to enable the apparatus to perform said generating of the first/second

3   ranking for said first/second candidate operation by generating a first/second version

4   ranking for said first/second candidate operation that favors a later version over an

5   earlier version, when said first data stored in said first dataset is published by a third

6   application, and said first/second application being a different version of said third

7   application.

1   53.   The article of claim 52, wherein said programming instructions are further

2   designed to enable the apparatus to perform said generating of first/second version

3   ranking by performing a predetermined arithmetic operation on said first/second

4   binary application identifier with said third binary application identifer that yields a

5   higher verion ranking for a later version, when said first, second and third

6   applications are identifed by first, second and third application identifiers comprising

7   first, second and third version infromation.

1   54.   The article of claim 51, wherein said programming instructions are further

2   designed to enable the apparatus to perform said generating of the first/second

3   ranking for said first/second candidate operation by generating a first/second

4   function ranking for said first/second candidate operation that favors an application

5   having more function/service matches with said third application over an application

6   having less function/service matches with said third application, when said first data

7   stored in said first dataset is published by a third application, and said first/second

8   and third applications are different applications.

1   55.   The article of claim 54, wherein said programming instructions are further

2   designed to enable the apparatus to perform said generating of first/second

3   function/service ranking by performing at least a predetermined boolean operation

4   on said first/second function/service information encoded in binary form with said

5   third function/service information encoded in binary form that yields a higher

6   function/service ranking for an application with closer function/service matches,

7   when said first, second and third applications are identifed by first, second and third

8   application identifiers comprising first, second and third function/service information

9   encoded in a binary form.

1   56.   The article of claim 51, wherein said programming instructions are further

2   designed to enable the apparatus to further base said selecting of at least one of

3   said first and said second candidate operations for performance, on one or more

4   selection rules.

1   57.   The article of claim 56, wherein said one or more selection rules comprise

2   one or more constant select rules.

1   58.   The article of claim 57, wherein said one or more constant select rules

2   comprise a first constant selection rule that selects the candidate operation with the

3   highest ranking for performance.

1   59.   The article of claim 56, wherein said one or more selection rules comprise

2   one or more variable selection rules that variably selects one or more candidate

3   operations based on user input.

1   60.   The article of claim 44, wherein said programming instructions are further

2   designed to enable the apparatus to

3   determine if said first application provides a second function/service to which

4   second data stored in a second data set are associated, and

5   if so, generating a second candidate operation that distributes said second

6   data stored in said second data set into said first application for performance

7   consideration.

1   61.   The article of claim 44, wherein said first data comprises control data usable

2   to control operation of said first application.
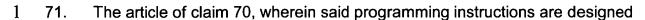
1 62. The article of claim 44, wherein said first data comprises user data

2 consumable using said first application.

1 63. The article of claim 44, wherein said programming instructions are further

2 designed to enable the apparatus to discover presence of said first application.

1 64. The article of claim 63, wherein s said programming instructions are further

2 designed to enable the apparatus to perform said discovering by

3   retrieving a plurality of presence criteria of said first application, and

4   determining if the presence criteria are met.

1 65. The article of claim 64, wherein said programming instructions are further

2 designed to enable the apparatus to perform said retrieving by retrieving said

3 plurality of presence criteria from a desriptor of said first application.

1 66. The article of claim 64, wherein said programming instructions are further

2 designed to enable the apparatus to perform said determining if the presence

3 criteria are met by accessing a registry of an operating environment within which

4 said first application is installed to verify if said presence criteria are met.

1 67. The article of claim 44, wherein said article and said apparatus are one of the

2 same, and said article/apparatus further comprises at least one processor coupled

3 to the storage medium to execute the programming instructions.

1   68.   The article of claim 67, wherein said article/apparatus is a selected one of a

2   wireless mobile phone, a palm sized computing device, a notebook sized computing

3   device, a desktop computing device, a set-top box and a server.

1   69.   A article of manufacture comprising

2   a storage medium having a recordable medium; and

3   a plurality of machine readable programming instructions recorded on said

4   recordable medium of said storage medium, designed to program an apparatus to

5   enable the apparatus to

6   generate a first ranking for a first candidate operation to distribute data

7   stored in a dataset, exported from a first application, to a second

8   application,

9   generate a second ranking for a second candidate operation to distribute

10   said data stored in said dataset, exported from said first application, to

11   a third application, and

12   select one or both of said first and second candidate operations for

13   performance, based at least in part on said generated first and second

14   rankings.

1   70.   The article of claim 69, wherein said programming instructions are designed

2   to enable said apparatus to perform said generating of the first/second ranking for

3   said first/second candidate operation by generating a first/second version ranking for

4   said first/second candidate operation that favors a later version over an earlier

5   version, when said second/third application is a different version of said first

6   application.

1   71.   The article of claim 70, wherein said programming instructions are designed

2   to enable said apparatus to perform said generating of first/second version ranking

3   comprises performing a predetermined arithmetic operation on said second/third

4   version information with said first version information that yields a higher verion

5   ranking for a later version, when said first, second and third applications are

6   identifed by first, second and third application identifiers comprising first, second and

7   third version infromation.

1   72.   The article of claim 69, wherein said programming instructions are designed

2   to enable said apparatus to perform said generating of the first/second ranking for

3   said first/second candidate operation comprises generating a first/second function

4   ranking for said first/second candidate operation that favors an application having

5   more function/service matches with said first application over an application having

6   less function/service matches with said first application, when said first and said

7   second/third applications are different applications.

1   73.   The article of claim 72, wherein said programming instructions are designed

2   to enable said apparatus to perform said generating of first/second function/service

3   ranking comprises performing a predetermined boolean operation on said first

4   function/service information encoded in binary form with said second/third

5   function/service information encoded in binary form that yields a higher

6   function/service ranking for an application with closer function/service matches,

7   when said first, second and third applications are identifed by first, second and third

8   application identifiers comprising first, second and third function/service information

9   encoded in a binary form.

1   74.   The artcile of claim 69, wherein said programming instructions are designed

2   to enable said apparatus to further based said selecting of at least one of said first

3   and said second candidate operations for performance, on one or more selection

4   rules.

1   75.   The article of claim 74, wherein said one or more selection rules comprise

2   one or more constant select rules.

1   76.   The article of claim 75, wherein said one or more constant select rules

2   comprise a first constant selection rule that selects the candidate operation with the

3   highest ranking for performance.

1   77.   The article of claim 74, wherein said one or more selection rules comprise

2   one or more variable selection rules that variably selects one or more candidate

3   operations based on user input.

1   78.   The article of claim 69, wherein said article and said apparatus are one of the

2   same, and said article/apparatus further comprises at least one processor coupled

3   to the storage medium to execute the programming instructions.

1   79.   The article of claim 78, wherein said article/apparatus is a selected one of a

2   wireless mobile phone, a palm sized computing device, a notebook sized computing

3   device, a desktop computing device, a set-top box and a server.

1   80.   An article of manufacture comprising

2   a storage medium having a recordable medium; and

3 a plurality of machine readable programming instructions recorded on said

4 recordable medium of said storage medium, designed to program an apparatus to

5 enable the apparatus to

6   retrieve a plurality of data subscription statements of an application,

7   determine importable data of said application based on data subscription

8   specifications of said data subscription statements, and

9   import said importable data of said application, based at least in part on

10   said data subscription specification of said data subscription

11   statements of said application.

1 81. The article of claim 80, wherein said programming instructions are designed

2 to enable the apparatus to perform said retrieving of the data subscription

3 statements of the application by retrieving the data subscription statements from a

4 desriptor of the application.

1 82. The article of claim 80, wherein said data subscription specifications

2 reference data having cross application function/service based classifications of a

3 cross application function/service based data classification model.

1 83. The article of claim 82, wherein said data subscription spefications comprise

2 encoded binary references referencing said data having having cross application

3 function/service based classifications of a cross application function/service based

4 data classification model.

1 84. The article of claim 80, wherein said programming instructions are further

2 designed to enable the apparatus to discover presence of said application.

1   85.   The article of claim 84, wherein said programming instructions are designed

2   to enable the apparatus to perform said discovering by

3   retrieving a plurality of presence criteria of said application; and

4   determining if the presence criteria are met.

1   86. .   The article of claim 85, wherein said programming instructions are designed

2   to enable the apparatus to perfrom said retrieving by retrieving said plurality of

3   presence criteria from a desriptor of said application.

1   87.   The article of claim 85, wherein said programming instructions are designed

2   to enable the apparatus to perform said determining if the presence criteria are met

3   by accessing a registry of an operating environment within which said application is

4   installed to verify if said presence criteria are met.

1   88.   The article of claim 80, wherein said article and said apparatus are one of the

2   same, and said article/apparatus further comprises at least one processor coupled

3   to the storage medium to execute the programming instructions.

1   89.   The article of claim 88, wherein said article/apparatus is a selected one of a

2   wireless mobile phone, a palm sized computing device, a notebook sized computing

3   device, a desktop computing device, a set-top box and a server.

1   90.   An article of manufacture comprising

2   a storage medium having a recordable medium; and

3   a plurality of machine readable programming instructions recorded on said

4   recordable medium of said storage medium, designed to program an apparatus to

5   enable the apparatus to

6   retrieve a plurality of presence criteria of an application,

7   determine if the presence criteria are met,

8   if so, further determine importable data of said application, and

9   import said importable data of said application.

1   91.   The article of claim 90, wherein said programming instructions are designed

2   to enable the apparatus to perform said retrieving by retrieving said plurality of

3   presence criteria from a desriptor of said application.

1   92.   The article of claim 90, wherein said programming instructions are designed

2   to enable the apparatus to perform said determining if the presence criteria are met

3   by accessing a registry of an operating environment within which said application is

4   installed to verify if said presence criteria are met.

1   93.   The article of claim 90, wherein said article and said apparatus are one of the

2   same, and said article/apparatus further comprises at least one processor coupled

3   to the storage medium to execute the programming instructions.

1   94.   The article of claim 93, wherein said article/apparatus is a selected one of a

2   wireless mobile phone, a palm sized computing device, a notebook sized computing

3   device, a desktop computing device, a set-top box and a server.

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